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Typed or Printed Name	<u>MARGARET D. PIERCE</u>	Express Mail No.	EL 563 388 364 US
Signature	<u>M. Pierce</u>	Date	January 25, 2001
		Attorney Docket	6510-173CON
		First Named Inventor	Raz et al. #6/
		Application Number	Not Available
		Filing Date	Herewith /I.D.S.
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
		Title	<i>Inhibitors of DNA Immunostimulatory Sequence Activity</i>

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## INFORMATION DISCLOSURE STATEMENT

Address to:  
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Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration. A Form PTO-1449 listing the references and copies of the cited references accompany this paper. Applicants would appreciate the Examiner's initialing and returning the form to indicate that the references have been reviewed and made of record.

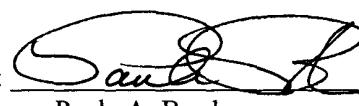
All of the references identified herein were disclosed in parent application Serial No. 09/092,314 (filed June 5, 1998) and, as such, copies thereof are not included pursuant to the provisions of 37 C.F.R. §1.98(d), except as noted below.

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one of the above references constitutes prior art to the present application within the meaning of 35 U.S.C. §102.

As applicants have not yet received a first Action on the merits, no fee is believed to be required for filing this Disclosure Statement. If, however, the PTO finds that for some reason a fee is due, our Deposit Account No. 50-0815 may be charged therefor.

Respectfully submitted,  
BOZICEVIC, FIELD & FRANCIS LLP

Date: Jan. 25, 2001

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<b>INFORMATION DISCLOSURE CITATION</b> <b>(000125100000/ QPKKFT</b> <i>(Use several sheets if necessary)</i>		ATTY. DOCKET NO. 6510-173CON	SERIAL NO. Not Available
		APPLICANT Raz et al.	
		FILING DATE Herewith	GROUP Not Available

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 S-943  
 JC 09/17/94  
 01/26/01

### U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	1,234,718	Filed 90/15/69	Hilleman et al.			
	AB	3,725,545	04/03/73	Maes			
	AC	3,906,092	09/16/75	Hilleman et al.			
	AD	5,286,365	12/07/93	Rudolph et al.			
	AE	5,276,019	01/04/94	Cohen et al.			
	AF	5,278,302	01/11/94	Caruthers et al.			
	AG	5,331,090	07/19/94	Lernhardt			
	AH	5,453,496	09/26/95	Caruthers et al.			
	AI	5,580,859	12/03/96	Felgner et al.			
	AJ	5,703,055	12/30/97	Felgner et al.			
	AK	5,968,909	10/19/99	Agrawal et al.			

### FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation
	AL	0 173 254	08/22/85	Europe			Yes No
	AM	0 330 227	02/24/89	Europe			
	AN	0 468 520 A2	01/29/92	Europe			
	AO	WO 91/03251	03/21/91	PCT			
	AP	WO 95/26204	10/05/95	PCT			
	AQ	WO96/02555	02/01/96	PCT			
	AR	WO 98/10066	03/12/98	PCT			
	AS	WO98/18810	05/07/98	PCT			

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<b>INFORMATION DISCLOSURE CITATION</b> (Q1Q1261H111H/ QPKKPI <i>(Use several sheets if necessary)</i>				ATTY. DOCKET NO. 6510-173CON	SERIAL NO. Not Available		
				APPLICANT Raz et al.			
				FILING DATE Herewith	GROUP Not Available		
AT	WO98/37919	09/03/98	PCT				
AU	WO98/40100	09/17/98	PCT				
AV	WO98/52581	11/26/98	PCT				
AW	WO 98/53075	11/26/98	PCT				
<b>OTHER ART</b> ( <i>Including Author, Title, Date, Pertinent Pages, Etc.</i> )							
AX	Ballas et al. (1996) "Induction of NK Activity in murine and human cells by CpG Motifs in oligodeoxynucleotides and Bacterial DNA" <i>The American Association of Immunologists</i>						
AY	Bennett et al. (1985) "DNA Binding to human leukocytes." <i>The American Society for Clinical Investigation.</i> "						
AZ	Branch (1998) <i>Trends in Biochem. Sci.</i> , Vol. 23:45-50						
BA	Branda et al. (1996) "Amplification of antibody production by phosphorothioate oligodeoxynucleotides" Mosby-Year Book, Inc.						
BB	Corry et al. (1996) "Interleukin 4, but Not Interleukin 5 or Eosinophils, is required in a murine model of acute airway hyperreactivity." <i>The Rockefeller University Press</i> , Vol. 183.						
BC	Crooke (1998) "Antisense Research & Applications." Chapter 1:1-50						
BD	Davis et al. "Plasmid DNA is superior to viral vectors for direct gene transfer into adult mouse skeletal muscle." <i>Human Gene Therapy</i> , Vol. 4:733-740.						
BE	Ewel et al. (1992) "Polyinosinic-Polycytidylic Acid complexed with Poly-L-lysine and carboxymethylcellulose in combination with interleukin 2 in patients with cancer: Clinical and immunological effects." <i>Cancer Research</i>						
BF	Feltquate et al. (1997) "Different T Helper Cell Types and Antibody isotypes generated by saline and gene gun DNA immunization." <i>The Journal of Immunology</i>						
BG	Fuller et al. (1994) "A Qualitative Progression in HIV Type 1 Glycoprotein 120-Specific Cytotoxic Cellular and Humoral Immune Responses in Mice Receiving a DNA-Based Glycoprotein 120 Vaccine." <i>AIDS Research and Human Retroviruses</i> , Vol. 10						
BH	Hawkins et al. (1992) "Toward Genetically Targeted Research and Therapeutics." <i>Antisense Research and Development</i>						
BI	Hohlfeld et al. (1994) "The Immunobiology of Muscle." <i>Immunology Today</i> , Vol. 15.						
BJ	Iguchi-Ariga et al. (1989) "CpG methylation of the camp-responsive enhancer/promote sequence TGACGTCA abolishes specific factor binding as well as transcriptional activation." <i>Genes &amp; Development</i>						
BK	Jachimczak et al. (1993) "the effect of transforming growth factor - $\beta_2$ -specific phosphorothioate anti-sense oligodeoxynucleotides in reversing cellular immunosuppression in malignant glioma." <i>Journal of Neurosurgery</i> , Vol. 78						
BL	Jyonouchi et al. (1993) "Immunomodulating actions of Nucleotides: Enhancement of Immunoglobulin Production by Human cord Blood Lymphocytes." <i>Pediatric Research</i> , Vol. 64						
BM	Kemeny et al. (1992) "CD8+ T cells in allergy." <i>Basic Review Article</i>						
EXAMINER				DATE CONSIDERED			
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INFORMATION DISCLOSURE CITATION (QDQ1261H111W/QFKKHT) <i>(Use several sheets if necessary)</i>		ATTY. DOCKET NO. 6510-173CON	SERIAL NO. Not Available
		APPLICANT Raz et al.	
		FILING DATE Herewith	GROUP Not Available
BN	Kimura et al. (1994) "Binding of oligoguanylate to scavenger receptors is required for oligonucleotides to augment NK cell activity and induce IFN." <i>Science</i> , Vol. 116		
BO	Klinman et al. (1997) "Contribution of CpG Motifs to the Immunogenicity of DNA Vaccines." <i>The American Association of Immunologists</i> , Vol. 158(8)		
BP	Krieg (1995) "CpG DNA: A Pathogenic Factor in Systemic Lupus Erythematosus?" <i>Journal of Clinical Immunology</i> , Vol. 15		
BQ	Krieg et al. (1995) "CpG Motifs in bacterial DNA trigger direct B-cell activation." <i>Nature International Weekly Journal of Science</i> , Vol. 6522.		
BR	Krieg et al. (1989) "A role for endogenous retroviral sequences in the regulation of lymphocyte activation." <i>The Journal of Immunology</i> , Vol. 143		
BS	Krieg (1996) "Lymphocyte activation by CpG dinucleotide motifs in prokaryotic DNA." <i>Trends in Microbiology</i> , Vol. 4(2)		
BT	Lee et al. (1996) "Inhibition of IgE Antibody formation by Plasmid DNA immunization is Mediated by Both CD4+ and CD8+ T Cells." <i>Int'l Archives of Allergy and Immunology</i> , Vol. 113(1-3):227-30		
BU	Mader et al. (1993) "A steroid-inducible promoter for the controlled overexpression of cloned genes in eukarotic cells." <i>Biochemistry</i> , Vol. 90:5603-5607		
BV	Manickan et al. (1997) "Enhancement of Immune response to naked DNA Vaccine by Immunization with Transfected dendritic cells." <i>Journal of Leukocyte Biology</i> , Vol. 61		
BW	Messina et al. (1993) "The Influence of DNA structure in the in vitro simulation of murine lymphocytes by natural and synthetic polynucleotide antigens." <i>Cellular Immunology</i> , Vol. 147		
BX	Messina et al. (1991) "Stimulation of in vitro murine lymphocyte proliferation by bacterial DNA." <i>The Journal of Immunology</i> , Vol. 147		
BY	Mojcik et al. (1993) "Administration of a phosphorothioate oligonucleotide antisense to murine endogenous retroviral MCF env. Causes immune effects in vivo in a sequence-specific manner." <i>Clinical Immunology and Immunopathology</i> , Vol. 67		
BZ	Nakagawa et al. (1993) "Immunotherapy of Allergic Diseases." <i>Int. Arch. Allergy Immunol.</i>		
CA	Nishida et al. (1991) "Definition of GC-rich motif as regulatory sequence of the human IL-3 gene: coordinate regulation of the IL-3 gene by CLE2/GC box of the GM-CSF gene in T cell activation." <i>International Immunology</i> , Vol. 3		
CB	Pardoll et al. "Exposing the Immunology of Naked DNA Vaccines." Baltimore, Maryland 21205		
CC	Pisetsky et al. (1993) "Stimulation of murine lymphocyte proliferation by a phosphorothioate oligonucleotide with antisense activity for Herpes Simplex Virus." <i>Life Sciences</i>		
CD	Pisetsky et al. "Immunological Properties of Bacterial DNA." <i>Annals New York Academy of Sciences</i> , pg 152-163		
CE	Ramsay et al. (1994) "Enhancement of Mucosal IgA Responses by Interleukin 5 and 6 Encoded in recombinant vaccine vectors." <i>Reproduction, Fertility and Development</i>		
CF	Raz et al. (1996) "Preferential induction of a Th1 immune response and inhibition of specific IgE antibody formation by plasmid DNA immunization." <i>Proceedings of the National Academy of Sciences of the United States of America</i> , Vol. 93(10)		
CG	Raz et al. (1996) "Cytokines and Inflammatory Mediators." XP-002058356		

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<b>INFORMATION DISCLOSURE CITATION</b> (OAI2610000/OPKGFI <i>(Use several sheets if necessary)</i>		<b>ATTY. DOCKET NO.</b> 6510-173CON	<b>SERIAL NO.</b> Not Available
		<b>APPLICANT</b> Raz et al.	
		<b>FILING DATE</b> Herewith	<b>GROUP</b> Not Available
CH	Raz et al. "Intradermal gene immunization: The possible role of DNA uptake in the induction of cellular immunity to viruses." <i>Medical Sciences</i> .		
CI	Robinson et al. (1993) "Use of direct DNA inoculation to elicit protective immune responses." <i>Journal of Cellular Biochemistry</i>		
CJ	Sano et al. (1989) "Binding Properties of human anti-DNA antibodies to cloned human DNA fragments." <i>Immunology</i>		
CK	Sato et al. (1996) "Immunostimulatory DNA Sequences Necessary for Effective Intradermal Gene Immunization." <i>Science</i> , Vol. 273.		
CL	Schleimer et al. (1992) "IL-4 induces adherence of human eosinophils and basophils but not neutrophils to endothelium." <i>The Journal of Immunology</i>		
CM	Secrist et al. (1993) "Allergen Immunotherapy Decreases Interleukin 4 Production in CD4+ T cells from Allergic Individuals." <i>The Rockefeller University Press</i> .		
CN	Sedegah et al. (1994) "Protection against malaria by immunization with plasmid DNA encoding circumsporozoite protein." Vol. 91:9866-9870		
CO	Sparwasser et al. (1997) "Bacterial DNA causes septic shock." <i>Nature</i> , Vol. 386(6623):336-7		
CP	Tam et al. (1997) "Oligonucleotide-mediated inhibition of CD28 expression induces human T cell hyporesponsiveness and manifests impaired contact hypersensitivity in mice." <i>The Journal of Immunology</i> , Vol. 158.		
CQ	Tanaka et al. (1992) "An antisense oligonucleotide complementary to a sequence in ly2b increases γ2b germline transcripts, stimulated B cell DNA Synthesis and Inhibits immunoglobulin secretion." <i>The Journal of Experimental Medicine</i> , Vol. 175		
CR	Terr <u>Allergy Desensitization</u> , Chapter 56:739-743		
CS	Ulmer et al. (1993) "Heterologous Protection Against Influenza by injection of DNA encoding a viral protein." <i>Science</i> , Vol. 259		
CT	Warren (1992) "Adjuvants" XP-002058362		
CU	Xu et al. (1994) "Protection against leishmaniasis by injection of DNA encoding a major surface glycoprotein gp63 of L. Major." <i>Immunology</i> , pg 173-176		
CV	Yakubov et al. (1989) "Mechanism of oligonucleotide uptake by cells: Involvement of specific receptors?" <i>Microbiol. Immunol.</i> , Vol. 38(10)		
CW	Yamamoto (1994) "Commemorative lecture of receiving Imamura Memorial Prize. II. Mode of action of oligonucleotide fraction extracted from <i>Mycobacterium bovis BCG</i> " <i>Kekkaku (Japan)</i> , Vol. 69(9):571-4.		
CX	Yamamoto et al. (1992) "Unique Palindromic sequences in synthetic oligonucleotides are required to induce INF and augment INF-Mediated natural killer activity." <i>The Journal of Immunology</i> , Vol. 148.		
CY	Yamamoto et al. (1994) "Ability of oligonucleotides with certain palindromes to induce interferon production and augment natural killer cell activity is associated with their base length." <i>Antisense Research and Development</i>		
CZ	Yamamoto (1994) "Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence of AACGTT to Murine Splenocytes enhances interferon production and natural killer activity." <i>Microbiol. Immuno.</i> , Vol. 38(10)		

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		APPLICANT Raz et al.	
		FILING DATE Herewith	GROUP Not Available
DA	Zhao et al. (1993) "Comparison of cellular binding and uptake of antisense phosphodiester, phosphothioate, and mixed phosphorothioate and methylphosphonate oligonucleotides." <i>Antisense Research and development</i> , Vol. 3		
DB	Meeting Report, "International Meeting on the Nucleic Acid Vaccine for the prevention of Infectious Disease and Regulating Nucleic Acid (DNA) Vaccines." <i>Natcher Conference Center NIH</i>		
DC	Multi-Test Directions for Use, New York 11050		
DD	(September 30, 1993) <i>Biochemical and Biophysical Research Communication</i> , Academic Press, Inc.		

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